

ISO/TC 184/SC 4/QC N051

Date: 1998-02-04

Supersedes: ISO/TC 184/SC 4/QC N045

## Industrial automation systems and integration – Integration of life-cycle data for oil and gas production facilities – Project leader approval check list

### COPYRIGHT NOTICE:

This ISO document is a working draft or committee draft and is copyright protected by ISO. While the reproduction of working drafts or committee drafts in any form for use by Participants in the ISO standards development process is permitted without prior permission from ISO, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from ISO. Requests for permission to reproduce this document for the purposes of selling it should be addressed to ISO's member body in the country of the requester. Reproduction for sales purposes may be subject to royalty payments or a licensing agreement. Violators may be prosecuted.

### ABSTRACT:

This document provides a check list for quality assurance of the parts of ISO 15926, Integration of life-cycle data for oil and gas production facilities.

### KEYWORDS:

industrial data, oil and gas, facility, life-cycle, integration, quality assurance

**Project leader:** Nils Sandsmark  
POSC/CAESAR  
PO Box 490  
N-1301 Sandvika  
Norway  
**Telephone:** +47 67 12 86 93  
**Fax:** +47 67 12 86 99  
**Email:** nils.sandsmark@saga.com

**Part editor:** Jochen Haenisch  
Det Norske Veritas  
PO Box 300  
N-1322 Høvik  
Norway  
**Telephone:** +47 67 57 87 41  
**Fax:** +47 67 57 75 20  
**Email:** Jochen.Haenisch@dnv.com

### Comments to reader:

This document is part of the quality assurance procedures for ISO 15926. The procedures will be applied according to the process for the development of ISO 15926 as established during the meeting at the POSC/CAESAR offices on November 16<sup>th</sup>, 1997, and enhanced during the meeting on January 12<sup>th</sup>, 1998. Thus, the checklist, which is the main body of this document, will be used for quality check of parts before their delivery to the Quality Committee.

This document reflects input from Jesse Crusey as provided during the Orlando meeting.

Document type:	International Standard	Document subtype:	Not applicable
Document stage:	Working Draft (20)	Document language:	E
File name:	QC045_ISO15926_checklist	Template:	isobasw6.dot

## Contents

1 Scope .....	1
2 References .....	2
3 Definitions .....	2
3.1 qualification .....	2
3.2 qualify .....	2
4 Requirements .....	2
4.1 How to use the check list .....	2
4.2 The qualification process .....	2
4.3 Check list for parts of ISO 15926 .....	3

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 15926 is prepared by Technical Committee ISO/TC184, *Industrial automation systems and integration*, Subcommittee SC4, *Industrial data*.

ISO 15926 consists of the following parts under the general title *Industrial automation systems and integration – Integration of lifecycle data for oil and gas production facilities*:

- Part 1, Overview and fundamental principles;
- Part 2, Data model;
- Part 3, Methodology for the development and maintenance of reference data libraries.

The structure of this International Standard is described in ISO 15926-1.

## **Introduction**

ISO 15926 is an International Standard for the representation of oil and gas production facility life-cycle data. This representation is supported by a generic, conceptual model that is suitable as the basis for implementation in a shared database or data warehouse. The data model is designed to be used in conjunction with one or more reference data libraries – instances of the generic data model that are associated with particular application semantics.

ISO 15926 is organized as a number of parts, each published separately.

This checklist is part of the quality assurance procedures for ISO 15926. The procedures shall be applied according to the process for the development of ISO 15926 as established during the meeting at the POSC/CAESAR offices on November 16<sup>th</sup>, 1997, and enhanced during the meeting on January 12<sup>th</sup>, 1998.

# **ISO 15926**

## **Industrial automation systems and integration –**

### **Integration of life-cycle data for oil and gas production**

#### **facilities –**

#### **Project leader approval check list**

## **1 Scope**

This document presents the procedures necessary to assess the quality of an ISO 15926 part and to specify the improvements that should be made to the part prior to its release by SC4 for balloting.

Within the scope of the qualification activity are:

- the technical consistency of a part;
- the format and structure of the part document;
- the clarity of ideas, definitions, examples, graphical models, and illustrations;
- the technical elements, such as usage and syntax of EXPRESS and IDEF0.

Outside the scope of the qualification activity is:

- the evaluation of the correctness of the technical content of the part to satisfy the part scope .

Within the scope of this document are:

- the step-by-step procedures to assess the quality of parts of ISO 15926;

NOTE: The procedures differ among parts at Industry Review, Committee Draft, or Draft International Standard status.

- the identification of requirements that shall be met by parts of ISO 15926;
- the requirements for submission of material to the Quality Committee by the part project.

Outside the scope of this document are:

- relationships among information requirements within a part (also called assertions);
- technical discussions within a part;
- issues log for a part;
- the approval of a part by the Quality Committee;
- the definition of requirements that shall be met by parts of ISO 15926;

NOTE: The requirements for parts are derived from accepted documents within SC4. Clause 2 lists the primary references that contain these requirements.

- the part development and integration procedures used within the ISO 15926;
- the overall procedures for the development and approval process within SC4.

## **2 References**

This check list is based upon the corresponding check list for ISO 10303, TC184/SC4/QC N025. Modifications have been incorporated to match the scope and document structure of ISO 15926. The check list has been merged with a similar list from the "STEP application protocol qualification manual" (TC184/SC4 N369).

The following documents are required together with this check list:

- STEP part qualification procedures (TC184/SC4 N370);
- Supplementary directives for the drafting and presentation of ISO 10303 (TC184/SC4 N537).

## **3 Definitions**

For the purposes of this part of ISO 15926, the terms and definitions given in ISO 15926-1 and the following apply:

### **3.1 qualification**

The process of assessing the quality of a standard as it progresses through its development and approval.

### **3.2 qualify**

An assessment using pre-defined criteria or benchmarks.

## **4 Requirements**

### **4.1 How to use the check list**

This check list is for use by Project Leaders and Part Editors of parts of ISO 15926. A completed check list shall accompany each part that is delivered for Qualification. A completed check list is defined as: each numbered item has at least one box checked or a N/A against it. This is to ensure that a document fulfils the quality standards of ISO 15926, before it is handed over for final quality review. It is recommended that the check list accompanies the development of a part rather than being applied on the completed document. The contents in this list may also be useful in planning parts of ISO 15926 with respect to selecting appropriate editing tools, estimating labour resource requirements, and scheduling.

### **4.2 The qualification process**

Each part of ISO 15926 needs approval by the Quality Committee of TC184/SC4. This process is referred to as Qualification. Qualification is done by a representative of the Quality Committee and requires either a simple review of the part, or one or several workshops with attendance from the part project.

The following process leads to the Qualification of a part of ISO 15926:

- The project team of a part of ISO 15926 shall complete its internal review report, dated and signed by the Project Team's representative to the Quality Committee. The basis for the internal review shall be the latest Qualification manual from the TC184/SC4/Quality Committee. This internal review report shall verify that the part documentation is complete and satisfies the appropriate TC184/SC4 methods documents. The internal review report shall identify all violations to any of the applicable TC184/SC4 methods documents to which the part shall adhere. In addition, the report shall consist of issues identified, recommended resolutions, corrective actions taken by the team, and issues that remain open. Each issue shall be related to one or more subclauses within the part to be qualified, identifying the specific violation.
- The Project Leader shall review the part documentation and verify that the items that are identified on the check list in annex A are correct and that the internal review report satisfies the reporting criteria.
- The Project Leader shall date and sign the completed check list.
- The Project Leader shall inform the Working Group Convenor on the status of the part and shall request sign-off on the part. A hard copy of the part, a copy of this completed check list, and a summary report provided by the internal team review shall be sent to the Working Group Convenor.
- The Project Leader initiates the Qualification process by a formal request to the Production Support Team Leader of the Quality Committee; either a simple document review may be requested or a tentative date for a qualification workshop. A qualification workshop may be required to resolve issues that are identified in the internal review report.
- The Project Leader shall send a hard copy of the part, an electronic copy (PDF format for the main document, ASCII format for Express code), a copy of this completed check list, the internal review report, and a summary report provided by the internal team review to the Production Support Team Leader of the Quality Committee.
- After all signed and dated check lists have been received by the Production Support Team Leader a workshop (if required) date shall be confirmed with the Project Leader for the part in question.
- For part review and before a potential workshop the Project Support Team Leader shall randomly choose three pages from the part. If there are six errors identified in these three pages, the review shall be considered completed, a potential workshop shall be cancelled, and the part shall be returned to the Project Leader for rework.

### **4.3 Check list for parts of ISO 15926**

To document the quality of a part of ISO 15926 with respect to its conformance to ISO TC184/SC4 procedures and rules a check list shall be filled out for each part of ISO 15926 before it is handed over to the ISO TC184/SC4 Quality Committee.

The check list is in annex A and includes requirements for the following items:

- project team review;
- cover page;
- contents, annexes, figures, and tables;
- foreword and introduction;

## ISO 15926 Quality check list

- scope;
- normative references;
- definitions, symbols, and abbreviations;
- part specific definitions;
- information requirements;
- Express-G for information requirements;
- Express constructs;
- short form;
- long form;
- conformance requirements;
- PICS proforma;
- bibliography;
- index;
- part stage;
- required support documentation;
- copyright;
- the whole part.



## Annex A (normative)

### Project leader approval check list

To document the quality of a part of ISO 15926 with respect to its conformance to ISO TC184/SC4 procedures and rules the following check list shall be filled out for each part of ISO 15926 before it is handed over to the ISO TC184/SC4 Quality Committee.

#### A.1 Project team review

- 1 The completed internal review documents submitted by the Project Team to the Project Leader is dated and signed by the Project Team member assigned to Quality Committee and the person(s) that performed the review.  
☐
- 2 The Project Team has completed all applicable tasks that are required by the Quality Committee for ballot release. Especially:
  - ☐ the required elements for this standard exist and are organised into the proper document structure;
  - ☐ the definitions are understandable;
  - ☐ the EXPRESS schemas are syntactically correct and compilation evidence is given;
  - ☐ the significant outstanding issues have been resolved; no unresolved technical issues for DIS ballots, no unresolved issues at all for FDIS ballots.
- 3 The following items are ready for submission to the Quality Committee:
  - ☐ a paper copy of the part;
  - ☐ an up-to-date copy of the Issue Log for the part;
  - ☐ a validation report if the part is for industrial application;
  - ☐ a digital copy of the part in an agreed to format.
- 4 The Project Team has collected, reviewed, and recorded in the summary report all SEDS that impact the project development.  
☐
- 5 All errors identified by the internal team review have been corrected.  
☐
- 6 Violation recorded.
  - ☐ All issues have been resolved and are closed.
  - ☐ Issues remain open and are documented in the internal review summary report.

#### A.2 Cover page

- 7 Cover Page has the correct format, structure, and content as specified in annex A of the Supplementary Directives.  
☐
- 8 N-number is present and correct. If the document has been updated, the "Supersedes" field contains the previous N-number.  
☐
- 9 Date is present and of the correct format. Date format is YYYY-MM-DD.  
☐

- 10 Part Number and Title have been verified with the SC4 secretariat as being the same as that registered by TC 184/SC4 for the Project Type.  
☐
- 11 Proper use of upper and lower case letters in the Title as specified by Supplementary Directives 4.3.1.1 .  
☐
- 12 Correct ballot stage and ballot cycle are correctly indicated.  
☐
- 13 Abstract is clear and supports the Scope of the part.  
☐
- 14 Keywords are appropriate for inquiries by potentially interested parties.  
☐
- 15 Project Leader and Part Editor are correctly specified as registered with TC184/SC4; Names, Addresses, Telephone/FAX numbers, and E-mail addresses are present.  
☐
- 16 Comment to Reader box contains the correct required text for the part.  
☐

### **A.3 Contents, annexes, figures, and tables**

- 17 Table of Contents (TOC) starts on Page ii.  
☐
- 18 TOC is complete and contains the information specified by Supplementary Directives 4.2.2 .  
☐
- 19 All Annexes, Figures and Tables have a title and are presented in the correct format as specified by Supplementary Directives 4.2.2 .  
☐
- 20 The Index is present and starts on the page specified by the TOC.  
☐
- 21 The Index contains the required information for the part as per Supplementary Directives 4.4.3 .  
☐

### **A.4 Foreword**

- 22 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.2.3 .  
☐
- 23 The list of parts documented in the Foreword is current and correct for the date this part is submitted to the Quality Committee.
  - ☐ The list of parts was obtained from SOLIS on date \_\_\_\_\_.
- 24 All known parts of approved ISO 15926 projects are included as a list in the Foreword and are cited correctly (the titles are consistent with the SC4 approved project list).  
☐

- 25 All superseded versions are identified (this is not relevant for the first edition of a part):  
☐ yes;  
☐ not applicable.
- 26 There is no critical information in the Foreword that should be moved to the Introduction or another normative element of the document. (The Foreword is not under the control of SC4 as it may be changed and material may be removed by the ISO Central Secretariat.)  
☐

## A.5 Introduction

- 27 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.2.4 .  
☐
- 28 The Introduction provides a high-level overview of the part and :  
 — states the required knowledge base necessary for understanding the part;  
 — explains the industry need for the part;  
 — states the purpose of the part;  
 — identifies the application domain for the use of this part.  
☐
- 29 The Introduction is clear and understandable including graphics and explanatory notes.  
☐
- 30 The Introduction is consistent with the Scope (the Introduction may repeat the high level description from the Scope statement).  
☐
- 31 A data planning model is included in the Introduction.  
☐
- 32 Relationships with other parts under SC4 control have been identified and correctly referenced within this part.  
☐
- 33 All standards and documents that aid the user in understanding the technical content of the part have been identified and are consistent with Clause 3, Normative references, Bibliography or specific annex (depending upon how they are used).  
☐
- 34 All application-specific terms in the Introduction are defined in Clause 3, except for entities, attributes, UoFs, or application objects that are specified elsewhere in the part. Also, only domain concept terms that are defined differently from The Concise Oxford Dictionary are in Clause 3.  
☐
- 35 The Introduction does not include any requirements (requirements shall be in normative text, not in the Introduction).  
☐

## A.6 Scope

- 36 The Scope for the part begins on page 1 (right-hand side of document) and the format of the page is correct as specified by Supplementary Directives 4.1.4 and 4.1.6 including the different header than all other page headers for the part.  
☐
- 37 The title is located at the top of the first page of the Scope clause and matches the SC4 listing for the part title.  
☐
- 38 The clause number for the scope clause is 1.  
☐
- 39 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.3.1.2 .  
☐
- 40 The scope statement is complete and defines the bounds of the subject matter, such as:
- ☐ Types of oil and gas production facilities and reference data that are supported.
  - ☐ Discipline views of the facilities and use of the reference data that are supported.
  - ☐ Life-cycle stages that are supported.
  - ☐ Types of production facilities and reference data that are not supported.
  - ☐ Discipline views of the facilities and use of the reference data that are not supported.
  - ☐ Life-cycle stages that are not supported.
- 41 All in-scope and out-of-scope aspects of the part are identified.  
☐
- 42 The Scope as stated per the original New Work Item for the part:
- ☐ has been increased. If checked, a date shall be entered on next line:  
Date when New Work Item will be initiated \_\_\_\_\_.
  - ☐ has been decreased. If checked a date shall be entered on next line:  
Date when New Work Item will be initiated \_\_\_\_\_.
  - ☐ a SEDS will impact this scope.  
Identify the SEDS: \_\_\_\_\_
  - ☐ is unchanged.
- 43 The Convenor has been notified of Scope change:
- ☐ Yes.
  - ☐ No.
  - ☐ Scope is unchanged.
- 44 Scope statement is complete, concise, unambiguous, and clearly conveys the Scope of the part in terms that are understandable to an engineering user, application domain expert, and a software implementer with little or no SC4 experience.  
☐
- 45 Scope for the part agrees with the Scope registered with TC 184/SC4 for this project.  
☐
- 46 There are no user requirements or definitions in the scope statement.  
☐

- 47 The introduction of terminology is limited and understandable definitions for domain specific terminology are provided in clause 3.  
☐
- 48 Concerning additional information that may be required to understand the context and scope of the part the following is true:  
☐ is not required.  
☐ is included by reference to an informative annex, and the reference is made from within a NOTE.  
☐ is included by explanatory notes, examples, and graphics (e.g., Planning model).
- 49 The following are not included in this scope:  
 — detailed data requirements for the part;  
 — requirements on the use of the part;  
 — introductory material;  
 — assumptions or policies that affect the development of the part;  
 — historical or time-dependent references.  
☐
- 50 Issues on application terms which were problematic in industry reviews have been resolved and are documented in the issues log. If appropriate, definitions in Clause 3 were added or changed.  
☐
- 51 All scoping issues have been resolved.  
☐
- 52 Any necessary Informative References are either:  
☐ not required.  
☐ cited and cited correctly (e.g., from within NOTES or EXAMPLES), i.e. with reference to the Bibliography.
- 53 Any necessary Normative References are:  
☐ not required.  
☐ cited and cited correctly.
- 54 For the scope of this part the following is true:  
☐ includes components that are likely to be candidates for reuse in other parts of SC4. These components are \_\_\_\_\_ and may be reused by \_\_\_\_\_.  
☐ does not include reusable components.
- 55 Express Object names or Express entities are not included in the scope.  
☐
- 56 There are NO font sizes smaller than 9pt ( 3mm in height) in any of the diagrams, figures, or tables.  
☐
- 57 All NOTES and EXAMPLES are documented as specified per Supplementary Directives 4.5.3 and 4.5.4 .  
☐

## A.7 Normative references

- 58 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.3.1.3 .  
☐
- 59 All Normative reference to parts of ISO 15926 or any other documented public standard as required to support this part have been listed in Clause 2.  
☐
- 60 Reference to these standards are only found in normative text in normative clauses of this part (no normative text or normative reference is found in an EXAMPLE or a NOTE).  
☐
- 61 For this part all normative references to ISO standards are at STAGE 4 (DIS) or higher:  
☐ yes;  
☐ no, the project is aware of the impact on their schedule.
- 62 A footnote is provided for "to be published" parts.  
☐ yes;  
☐ no, not applicable.
- 63 Integrated Resource parts from which this part uses constructs have been listed.  
☐
- 64 Each normatively referenced part is intended to be part of the requirements of the part. References that are only informative in nature are placed in the Bibliography.  
☐
- 65 For references that are not parts of TC184/SC4, the references are complete and identify which information from those parts shall be used as part of the specification of this part (i.e. applicable clause or subclause is specified).  
☐ yes;  
☐ not applicable.

## A.8 Definitions, symbols, and abbreviations

- 66 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.3.2.1 and 4.3.2.2 .  
☐
- 67 All terms applicable to this part that have been defined in other publicly available standards have been identified and recorded in Clause 3.  
☐
- 68 All abbreviations are recorded in a separated subclause in clause 3.  
☐  
NOTE: Abbreviations are strongly DISCOURAGED in ISO parts.

## A.9 Part specific definitions

- 69 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.3.2.1.  
☐
- 70 Terms specific to the application domain of this part that are not found in other publicly available standards have been identified and defined in Clause 3.x "Other definitions".  
☐

- 71 All application specific terms with meanings different from those terms in ISO 10303-1 or The Concise Oxford Dictionary are defined, except for entities, attributes, UoFs, or application objects that are specified elsewhere in the part.  
☐
- 72 Terms defined in "Other definitions" are unambiguous, concise, and understandable to the end user of the part.  
☐
- 73 There are no application specific terms used in introduction, scope, or information requirement clauses that are not defined.  
☐
- 74 Definitions that conflict with any parts of TC184/SC4 have been identified and reported to the Quality Committee.  
☐
- 75 Definitions that are common to other parts and that should be included in any overview parts have been identified and reported to the Quality Committee.  
☐
- 76 The definitions conform to the established criteria for definitions (see annex A "Criteria for lexical definitions" in Qualification Procedure (TC184/SC4 N370)).  
☐
- 77 Explanatory notes and graphics critical to an unambiguous understanding of the definition are provided.  
☐
- 78 For terms that have common industrial application the definition notes whether it adheres to common industry usage or deviates from such usage.  
☐

#### **A.10 Information requirements**

- 79 Boilerplate text, structure, and format are correct as per Supplementary Directives 6.5 if the part specifies information requirements at all.  
☐
- 80 A high level summary of Information Requirements is provided.  
☐
- 81 The Information Requirements can be traced to the "in scope" statements in clause 1.  
☐
- 82 All Information Requirements adhere to the Scope.  
☐
- 83 The Information Requirement are complete.  
☐
- 84 The Information Requirements are clear and understandable.  
☐
- 85 All necessary illustrations are provided and are clear and helpful.  
☐

- 86 All necessary Informative References are cited and cited correctly.  
☐
- 87 All necessary Normative References are cited and cited correctly.  
☐
- 88 There is a demonstrated industrial need for the Information Requirements. The evidence of this industrial need is documented in the validation report.  
☐
- 89 All Information Requirements have been reviewed, understood, and approved by appropriate industry experts.  
☐
- 90 All Information Requirements are independent from implementation constraints, e.g., exchange structure, SDAI, database management system.  
☐
- 91 No Integrated Resource term or definition is found in the Information Requirements clauses EXCEPT by written request from the industry review experts to which this part is designed to assist. Such request is documented in the Validation Report of the part.  
☐
- 92 Each Information Requirement is appropriately and uniquely named and does not share its name with an attribute name.  
☐
- 93 Each Information Requirement definition is understandable and sufficient for the required audience, i.e. for the engineering users, application domain experts, and software implementers. There are no circular definitions.  
☐
- 94 Each Information Requirement name is consistent with its definition.  
☐
- 95 Explanatory notes and graphics that are critical to understanding the definitions are provided.  
☐
- 96 Domain terminology and English grammar are used properly.  
☐
- 97 All of the necessary Informative References are cited and cited correctly.  
☐
- 98 All of the necessary Normative References are cited and cited correctly.  
☐

#### **A.11 Express-G for information requirements**

- 99 Boilerplate text, structure, and format are correct as per Supplementary Directives 5.4 .  
☐
- 100 The Express-G diagrams are legible and structured logically for readability.  
☐
- 101 All Information Requirements are present in the diagrams as objects; each object has its correspondent Information Requirement.  
☐



102 Each object appears once as an original and else possibly once or several times as a reference.  
☐

103 All objects are appropriately named (see annex A “Criteria for lexical definitions” in Qualification Procedure (N370) and Supplementary Directives 5.2.2).  
☐

104 All information modelling constructs that are required are included and comply with ISO 10303-11 and here specifically annex D.  
☐

105 The modelling methodology (i.e. Express) is identified in a Note.  
☐

## **A.12 Express code**

106 Boilerplate text, structure, and format are correct as per Supplementary Directives 5.1, 5.2, and 5.3 .  
☐

107 The names of all Express constructs have been evaluated and been accepted as appropriate.  
☐

108 None of the Express constructs uses the schema name as part of its name.  
☐

109 None of the Express constructs names contains any abbreviations that are not in Clause 3.  
☐

110 The entity and attribute names "read" together well.  
☐

111 The names use a noun for objects (e.g. entities, attributes) and a verb for actions (e.g. rules, functions).  
☐

112 The definitions of all Express constructs are clear and understandable.  
☐

113 The definitions present the meaning of the object in a clear and succinct manner.  
☐

114 The definitions define the concepts and do not restate the Express.  
☐

115 The definitions adhere to the rules of English grammar.  
☐

116 The definitions adhere to the rules for good definitions (see annex A “Criteria for lexical definitions” in Qualification Procedure (N370) and Supplementary Directives 5.2.2).  
☐

117 The Express declarations and definitions correspond.  
☐

118 Required illustrations, examples, or explanatory notes needed to understand the definition are provided.  
☐

119 The informal propositions could not be written as formal propositions.

☐

120 Formal propositions are formatted in accordance with Supplementary Directives ??? .

☐

121 None of the formal or informal propositions could be moved to a supertype or global rule.

☐

122 There are no constraints on a supertype level that conflict with a constraint on a subtype level.

☐

123 Entity short names have been generated using the SC4 name repository.

☐

124 The short name table format and required wording conform to Supplementary Directives 6.6.1.1

☐

### **A.13 Short form**

125 The schema name has been evaluated and is found acceptable.

☐

126 The USE FROM statements appear at the beginning of the schema and are identified to the Integrated Resource schema from which they come:

- ☐ yes;
- ☐ not applicable.

127 AIC requirements

- ☐ The appropriate AICs have been correctly referenced and used.
- ☐ New AIC(s) is under development as a new work item.
- ☐ No AIC(s) is required.

128 USE'd AICs are listed first and alphabetically, followed by USE'd resource schemas that are also listed alphabetically.

☐

129 Express constructs are listed alphabetically within each schema USE FROM statement.

☐

130 A NOTE is included after each USE FROM statement identifying the USE'd part.

☐

131 Referenced FUNCTIONS are defined.

☐

132 Each FUNCTION is used at least once.

☐

133 The Short Form contains all part specific types, entities, rules, and functions ordered in this sequence and also ordered alphabetically within each category.

☐

134 There are no name conflicts among any of the Express constructs.

☐

135 The Short Form has been compiled.

☐ COMPILERS used \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### **A.14 Long form**

136 The Long Form has been compiled.

☐ COMPILERS used \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

137 All SUBTYPEs or SELECT types that were included into the long form due to the long form generation process and that are not in scope have been removed from the long form.

☐

138 There are no additional entities of a SELECT type in the long form beyond those entities that are in the USE FROM of the short form.

#### **A.15 Conformance requirements**

139 Boilerplate text, structure, and format are correct as per Supplementary Directives 8.7 .

☐

140 The conformance requirements are understandable.

☐

141 The conformance requirements are sufficient to meet the requirements of industry as identified during the Industry Review for the part.

☐

142 The conformance requirements are consistent with the scope and information requirements.

☐

143 There is a clear boundary established for each conformance class.

☐

144 Each AIC that is used is specified in the boundary definition.

☐

145 If there are any options identified, each option identifies the Information Requirements to which it applies.

☐

146 The conformance class definitions adhere to the standards of proper grammar.

☐

147 The conformance requirements are independent of any implementation method.

☐

### **A.16 PICS proforma**

148 Boilerplate text, structure, and format are correct as per Supplementary Directives 8.8.1.4 .  
☐

149 The PICS is consistent with the conformance classes and options.  
☐

### **A.17 Bibliography**

150 Boilerplate text, structure, and format are correct as per the Supplementary Directives 4.4.2 .  
☐

151 All bibliographic references italicise the title.  
☐

152 Only non-normative references are in the Bibliography.  
☐

153 No more references need to be moved to the normative references.  
☐

154 No other references were used in the preparation of this part.  
☐

### **A.18 Index**

155 Boilerplate text, structure, and format are correct as per Supplementary Directives 4.4.3 .  
☐

156 Dot leaders are used, and page numbers flush right.  
☐

157 All EXPRESS objects are included in the index, both with the location of their lexical and graphical (Express-G) specification.  
☐

158 For EXPRESS objects, the page on which the object's definition appears, is bolded.  
☐

### **A.19 Part stage**

159 This part is at:  
☐ Stage 6 (IS).  
☐ Stage 5 (FDIS).  
☐ Stage 4 (DIS).  
☐ Stage 3 (CD).  
☐ Stage 2 (WD) Industry Review.

### **A.20 Required support documentation**

160 The Issue Log is up-to-date for the Stage of the part in question.  
☐

161 The Issue Log has  
☐ evidence that issue resolutions are active at Stage 3 (open issues are permitted).  
☐ no technical issues OPEN at Stage 4 and has resolutions recorded per the ISO format.  
☐ no OPEN issues at Stage 5 and has resolutions recorded per the ISO format.

162 The Validation Report is complete for the Stage of the part in question.

- ☐ yes;
- ☐ no, the part shall not be validated by industry.

163 There are Usage Scenarios for the part in annex \_\_\_\_.

- ☐ yes;
- ☐ no, the part shall not be validated by industry.

164 The technical discussion in annex \_\_\_\_ is concise and contains useful and clarifying information about the part.

☐

## **A.21 Copyright**

If the part is at Stage 4 or beyond the following items shall be checked:

165 The copyright symbol and statement is on the bottom of page ii. It is correct and as specified by Supplementary Directives 4.2.2 .

☐

166 The correct copyright is on page 1 and it is as specified by Supplementary Directives 4.1.4 .

☐

167 Each page of the Document has the correct page header with the copyright symbol as specified by Supplementary Directives 4.1.4 .

☐

## **A.22 The whole part**

168 The scope of this part is co-ordinated with and contained within the overall scope of TC184/SC4, it is "Industrial Data".

☐

169 The part conforms to the documentation and format requirements as outlined in the Supplementary Directives.

☐

170 The declarations of EXPRESS constructs conform to the current version of the EXPRESS language reference manual (ISO 10303-11).

☐

171 The document exhibit the proper use of terminology.

☐

172 There are no consistent formatting errors throughout the part.

☐

173 The document references other documents correctly.

☐

174 Diagrams, examples, and illustrations are presented in proper format.

☐

- 175 The part had sufficient industrial exposure before and during its development.  
☐
- 176 There was a broad review by industries within the ISO community.  
☐
- 177 This part addresses industry needs that are not adequately represented within the ISO community.  
☐
- 178 A list of application experts who reviewed information requirements definitions was provided.  
☐
- 179 There is evidence that industry agrees with the scope, functionality, and requirements of the part.  
☐
- 180 Application experts have reviewed and accepted the Scope, Information Requirements, and Conformance Requirements.  
☐
- 181 The scope is not too constrained for a specific industry, but is generic enough for many industries.  
☐
- 182 There are no constraints that prevent this part from being used by a wide spectrum of industrial applications.  
☐
- 183 The name of this part is appropriate given the content and is not misleading.  
☐
- 184 The part is technically and editorially stable, and it is unlikely that it will undergo major changes.  
☐
- 185 There are no other parts in TC184/SC4 anticipated that would cause this part to change dramatically.  
☐
- 186 The part has demonstrated its value and use to an industrial application.  
☐
- 187 This part does not entail any legal risk; a failure by an implementation attributable to this specification would not constitute a major risk.  
☐
- 188 The part does as it stands not give an unfair advantage to any single firm or system implementation.  
☐
- 189 The documentation is sufficient to allow anyone implement the ideas in the part.  
☐
- 190 The document is under configuration control by the TC184/SC4 document repository(i.e., in STEP On-line Information System).  
☐

191 The part is included in the TC184/SC4 Resource Dependencies log.



192 All the required components relevant to this part and its development have been provided.



I have reviewed and verified the items marked on this document for part \_\_\_\_\_ .

Signature of Project Leader \_\_\_\_\_

Date:\_\_\_\_\_

## Index

qualification .....	2
qualify.....	2